

The only question that arises in describing this very pretty little shrew is its relationship to *C. gracilis*, Blainv., said to come from the Cape. That animal, however, is evidently, from the accounts given of it by de Blainville, Coquerel, and Trouessart, a member of the group of true pygmy shrews, to which *C. madagascariensis* belongs, all of which are decidedly smaller than *C. varilla*, and have short, crisp, and uniformly coloured fur. In addition, *C. gracilis* is said to be chestnut-brown above ("brun-marron"), and to have an incrassated tail, in both of which respects it differs materially from the animal now before us.

Besides the type, the Museum possesses three other specimens which I refer with some doubt to this species, the doubt being due to their bad condition. One of them was sent by Verreaux from the Cape, and the other two came from the collection of Sir Andrew Smith, who no doubt supposed they belonged to his *C. capensoides*, a species which, as the type shows, is not a *Pachyura*, is somewhat larger, and differs in other details from *C. varilla*.

IX.—*On small Mammals from Nicaragua and Bogota.*

By OLDFIELD THOMAS.

THE Museum has obtained from Dr. E. Rothschuh a few small mammals collected by him when at Managua, Nicaragua; and one of them proving to need description as new, a few notes on the others may be given at the same time.

1. *Lichonycteris obscurus*, gen. et sp. n.

One specimen.

LICHONYCTERIS*, gen. nov.

Dentition.—I. $\frac{2}{0}$, C. $\frac{1}{1}$, P. $\frac{2}{3}$, M. $\frac{2}{2} \times 2 = 26$.

Deciduous lower incisors and an anterior deciduous upper premolar may be present in early life.

Upper incisors small, not touching each other, standing equidistant in an even curve between the canines. Canines and cheek-teeth above and below very slender and delicate, almost as much so as in *Chæronycteris*; the molars narrow, with scarcely a trace of W-shaped cusps.

Skull light and papery, the elevation of the crown above

* λείχω, I lick. The bats of the present group feed by licking out the contents of berries &c. with their long fringed tongues.

the face more than in *Glossophaga*, less than in *Chæronycteris*, the general form being also intermediate between these two. Zygomatics absent. Bony palate extending backwards almost to the level of the most anterior point of the glenoid facets.

Nose-leaf as in *Glossophaga*, but shorter. Ears and tongue as in that genus. Interfemoral membrane well developed, equal to that of *Chæronycteris*. Wings to the terminal part of the metatarsals. Calcar distinct.

This genus adds another to the group of Glossophagine bats, of which there are now eight genera, all closely allied and only distinguished from each other by the various proportions in which they divide some half a dozen characters. The cheek-teeth range from 4 to 6 above and 5 to 6 below; but it is not always quite easy to tell whether, when the number is below 6, the missing teeth are premolars or molars. On the whole, in the present case it seems fairly clear that the missing teeth above are the anterior premolar and the posterior molar, and that the latter tooth is missing below. This would make the formula as above given and similar to that of *Leptonycteris*.

On the whole, important as the number of teeth may seem to be, I am inclined to consider *Lichonycteris* most nearly allied to *Chæronycteris*, from which, as from *Glossophaga*, *Monophyllus*, *Lonchoglossa*, and *Anura*, it differs by the reduction of its cheek-teeth to the number possessed by *Leptonycteris*. *Phyllonycteris* has the same total number in the lower jaw, but they have been differently assigned to molars and premolars (P. 2, M. 3), a point on which I can at present express no opinion.

Lichonycteris obscura, sp. n.

Size and general appearance of *Glossophaga soricina*. Nose-leaf about equally high as broad. Ears short, evenly rounded off above, their outer margin concave below the tip and notched again below opposite the tip of the tragus. Antebrachial membrane mostly naked above, but the basal third of the forearm is thickly clothed with fur, and some of this extends on to the membrane; metacarpal bone of thumb hairy; rest of wings naked except along the sides of the body to a line from the middle of the humerus to the middle of the femur. Interfemoral membrane extending to the level of the end of the tibiæ, its upper surface naked. Tail reaching to the level of the knee, its tip appearing on the upper surface of the membrane. Below, the antibrachial membrane is hairy, as is the basal third of the forearm, and the wings between the humerus and the flanks.

Colour uniformly smoky brown above and below, darker than in *Glossophaga soricina*.

Dimensions of the type (B.M. 95.4.27.1 : an adult female, in spirit) :—

Head and body 46 millim.; tail 6·7; ear 10; forearm 33; lower leg 12·6; calcar 5·8; hind foot, without claws, 7·5; interfemoral membrane in centre 17.

Skull: basal length 16·8; greatest length 19·7; breadth of brain-case 8·1; interorbital breadth 4; palate length 11, breadth outside last molar 4·4; front of canine to back of last molar 6·4, the same below 6·4.

Hab. Managua, Nicaragua. Coll. Dr. Rothschuh.

This interesting little bat, on whose discovery Dr. Rothschuh is to be congratulated, has a superficial resemblance to the common *Glossophaga soricina*, found in the same region. Without any very exhaustive examination, however, it may be easily distinguished by its hairy forearms, extension of wings to metatarsus, minute upper incisors not touching one another, and the entire absence, at least in the adult, of lower incisors. These points would all be visible in a freshly killed specimen without extraction of skull, and may be commended to the attention of collectors.

2. *Oryzomys Couesi*, Alst.

One specimen, male.

3. *Oryzomys gracilis*, Thos.

Three specimens, all males.

This is a considerable extension of the known range of *O. gracilis*, which was founded on a skin from Concordia, Colombia. The three specimens from Managua, while obviously of the same species, differ considerably among themselves, and show that a good deal of allowance for variability should be made when studying these rats. Thus one of them, like the type, has a partially bicolor tail, while the other two have this member wholly dark; the interparietal of one is narrow and straight anteriorly, of the second broad and straight in front, and of the third convex anteriorly; the palatal foramina are in no two quite alike, those of one being fairly similar to those of the type, while in the other two they are broader in different degrees.

The measurements of a spirit-specimen are as follows :—

Head and body 92 millim.; tail 107; hind foot, without claws, 27; ear 16.

4. *Marmosa* * *murina*, L.

One specimen.

From Bogota some skins of Muridæ have been received, among which are specimens apparently referable to *Oryzomys minutus*; Tomes, *O. spinosus*, Thos., *O. gracilis*, Thos., and, in addition, the following new species:—

1. *Oryzomys princeps*, sp. n.

Size large, proportions very much as in *Mus rattus*. Fur long (about 14 millim. on back), soft, but not specially fluffy. General colour a rich orange-rufous, darkened along the middle line above, richer along the sides, brightest though palest on the belly, where the hairs for their terminal third are a clear orange-buff. Line of demarcation not marked. Ears of medium size, fairly well haired, black. Hands and feet dark brown on the metapodials mesially, silvery whitish laterally and on the digits; fifth hind toe reaching just past the base of the fourth. Tail very long, well haired but not tufted, uniformly blackish brown throughout.

Skull with a long flattened muzzle, so that the profile is perfectly straight from the vertex on the middle of the parietals to the tip of the nasals. Interorbital space narrow, concave above mesially, its edges square but not beaded. Zygomatic plate straight in front, not projecting. Palatal foramina large and well open, reaching back just to the level of the front of m.1. Bullæ small.

Molars very large, broad and squarish, the projecting cusps prominent.

Dimensions of the type (an adult male skin):—

Head and body 181 millim.; tail 226; hind foot 35; ear (c.) 17.

Skull: basal length 36, basilar length 33·3, greatest breadth 21·8; nasals 15·6 × 4·9; interorbital breadth 5·2; interparietal 4·1 × 11·8; palate length from henselion 18; diastema 10·6; palatal foramina 8·2 × 3·5; length of upper molar series 7·5.

This fine species is one of the handsomest of the whole group, equalling or surpassing in beauty the Rio Janeiro *O. ferrugineus* described last year, although its colour is

* MARMOSA, Gray (1821).

Syn. *Asagis*, Gloger (1841).

Micoureus, Less. (1842). See Ann. & Mag. Nat. Hist. (6) xv. p. 190, footnote.

darker and less brilliant than in that species. As to its real affinities, I am unable to speak with certainty, but it seems to be one of the group of *Oryzomys* which show a tendency towards *Rhipidomys*, although, so far as I know, there is no described species with which it could possibly be confounded.

2. *Oryzomys Childi*, sp. n.

Size medium. Fur rather long (11–12 millim. on back), straight, of medium texture. General colour dull grizzled grey-brown, the hairs dark slate, with pale brown tips. On the middle part of the back all the hairs are without brown tips, and the slate-colour being here specially dark, a long oval blackish patch is formed. Under surface greyish white, the tips of the hairs white; line of demarcation fairly well defined. Ears large, finely haired, black. Feet long, whitish above, a faint brownish discoloration on the metatarsals; fifth hind toe, without claw, reaching just past the middle of the first phalanx of the fourth. Tail long, slender, thinly haired, bicolor, brown above, whitish beneath.

Skull smooth, rounded, and little ridged. Interorbital edges rounded, not beaded. Palatal foramina rather short. Molars as in typical *Oryzomys*.

Dimensions of the type (an adult female skin):—

Head and body 131 millim.; tail 143; hind foot 31; ear (c.) 16.

Skull: front corner of interparietal to tip of nasals 29·5; greatest breadth 16·8; nasals $12 \times 3\cdot7$; interorbital breadth 5; length of zygomatic plate 3·8; palate length from henselion 14·2; diastema 8·5; palatal foramina $5\cdot6 \times 2\cdot4$; length of upper molar series 5·5.

O. Childi is by the shape of its skull evidently closely allied to *O. meridensis*, Thos., from which it mainly differs by its dull brown instead of rufous coloration, longer fur, and its blackish dorsal area.

The name of this species is given in honour of Mr. George D. Child, through whose kind instrumentality the specimens have been obtained.

3. *Oryzomys laniger*, sp. n.

Fur long, hairs on back about 12 millim. in length; very soft and fluffy. General colour above dull olivaceous grey; the hairs dark slate for nine tenths of their length, their tips olive. Under surface similar, but paler, the tips of the hairs dull yellowish; line of demarcation not defined. Ears fairly large, naked. Metapodials brown mesially, their edges and

the whole of the digits white; hind feet very short in proportion to the general size; fifth hind toe very long, reaching, without claw, nearly to the end of the second phalanx of the fourth. Tail slender, finely haired, uniformly dark brown throughout.

Skull rather thin and papery for its size, with a large rounded brain-case, and broad rounded interorbital space, whose edges are quite unbeaded, scarcely even angular. Zygomatic plate narrow, slanting backwards in front. Palatal foramina large and open, not quite reaching backwards to the level of the front of $\underline{m.1}$. Posterior edge of palate level with the middle of $\underline{m.3}$. Bullæ small.

Molars large and oblong, as in *Oryzomys* and *Rhipidomys*.

Dimensions of the type (an adult female skin):—

Head and body 117 millim.; tail 123; hind foot (moistened) 21·8; ear (e.) 17.

Skull: basal length 24, basilar length 21·7, greatest breadth 15·4; nasals $10\cdot3 \times 3\cdot6$; interorbital breadth 5; interparietal $3\cdot2 \times 10\cdot2$; length of zygomatic plate 2·2; palate length from hensenion 12; diastema 7·8; palatal foramina $5\cdot5 \times 2\cdot4$; length of upper molar series 4·7.

This fluffy-haired Vesper Mouse has very much the appearance of an *Acodon*, say of *A. olivaceus*, but its short feet and broad heavy molars show that it is essentially different from any member of that group.

X.—On some Coccidæ obtained by Mr. C. A. Barber in the Island of Antigua, W.I. By T. D. A. COCKERELL, Entomologist of the New Mexico (U.S.A.) Agricultural Experiment Station.

WHEN leaving Antigua Mr. Barber was so kind as to send me a parcel of scale-insects which he had collected there; and as the specimens prove to be of considerable interest, the following notes are offered.

(1) *Orthezia insignis*, Douglas.

On roots and stems of *Clitorea ternatea* and stems of *Coleus*; very destructive to the latter. This extremely troublesome species is getting very widespread; out of doors in the tropics and in temperate regions in hothouses.